Reviewer's report

Title: Early increase in serum-COMP is associated with joint damage progression over the first five years in patients with rheumatoid arthritis

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Reviewer: Rong Mu

Reviewer's report:

This is an interesting paper and the topic of this paper is of potential clinical importance. The authors have identified the relevance of alteration of serum concentrations of COMP in three months as an indicator for progressive joint destruction in RA. There are several papers about COMP and RA, but has limited paper on change of COMP as a dangerous signal such as this paper. Therefore it is novel in this respect. I would recommend the authors respond to several items.

1. A larger number of patients in group DeCr were treated with prednisolone from inclusion to the 24 month follow-up and fewer patients in group InCr from the 3 months to the 2 year follow-up. Because prednisolone is also benefit for joint destruction, it is possible that it was the usage of prednisolone instead of alteration of COMP predicting the joint damage. The influence of prednisolone should be excluded.

2. What is the best interval for monitoring COMP? 3 months? 6 months? Or longer? The authors mentioned the data at 6 months, 1 and 2 years. More clarity on this and the implications of your data would be very helpful and give the paper more meaning.

3. Why the authors use 20% as a borderline? Please just be more specific about it.

4. The Group InCr had shorter disease duration of 3.5 ((1-12) months, while the other two groups had longer disease duration of 6 months, although no significant differences were found. Is the level of COMP related to the disease duration?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests